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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,500	12/02/2004	Juan Luis Hancke Orozco	Herbal Powers	4925

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PHARMACEUTICAL PATENT ATTORNEYS, LLC
55 MADISON AVENUE
4TH FLOOR
MORRISTOWN, NJ 07960-7397

EXAMINER	
RAHMANI, NILOOFAR	
ART UNIT	**PAPER NUMBER**
1625	

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/516,500	HANCKE OROZCO ET AL.	
	Examiner	Art Unit	
	Niloofar Rahmani	1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *53-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *53-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 53-73 are pending and claims 1-52 are cancelled.

2. ***Priority***

This application is a 371 of PCT/EP04/05516, filed on 05/21/2004, which claims the priority of CHILE 178-2004, filed on 02/03/2004.

3. ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 53-73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 67, 70-71 are rejected because the terms " receptor?, NF?B., interferon?" are confusing. Correction is required.

Claims 53-73 are rejected because the term "5,ha" is vague and unclear. What is "5,ha" represented? Correction is required.

4. ***Specification***

The disclosure is objected to because of the following informalities: there is no description of drawings in the specification.

Appropriate correction is required.

5. ***Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because drawings are unclear and glory.

Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

6. *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 73 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant has not enabled "Andrographis paniculata". Do they enable this plant everywhere in the planet to treat Syndrome X? Does this plant under any and all condition can treat Syndrome X? This is a scope of enablement rejection.

7. *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 53-73 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter, which was not describe in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 53-65 lack description of the claim i.e. " diagnosing in a patient a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease". Applicant has not shown the nexus between compound 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and diagnosing Alzheimer's disease, acquired immune deficiency syndrome, and autoimmune disease. In addition, what kind of Alzheimer's disease, acquired immune deficiency syndrome, and autoimmune disease are diagnosable by compound 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone? Therefore, the specification lacks description of " method of diagnosing a patient with a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease".

8. Claims 66-72 lack description of the claim i.e. " diagnosing in a patient a disease". Applicant has not provided written description on how to diagnose a patient with any and all possible diseases known. Are temperatures high or low? High blood pressure? Dry skin? Therefore, the specification lacks description of " method of diagnosing a patient with a disease".

9. Claim 73 lacks description of the claim i.e. " diagnosing in a person the possible presence of Syndrome X". Applicant has not provided written description for how to diagnose a patient with possible presence of Syndrome X. What are the indications? How do you separate Syndrome X from Alzheimers? Therefore, the specification lacks description of " method of diagnosing in a person the possible of Syndrome X".

10. Claims 53-72 lack description of the claim i.e. " treating a patient with a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease". Applicant has not shown how to diagnose Alzhemer's disease, acquired immune deficiency syndrome, autoimmune disease, any and all diseases. Currently there is no way to positively identify a person with Alzhemer's without direct examination of the barain. Therefore, the specification lacks description of " method of treating a patient with a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease".

11. Claims 66-73 lack description of the claim i.e. " treating a person with a disease in the presence of Syndrome X". Applicant has not shown the nexus between compound 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and treating a person with a disease in the presence of Syndrome X. In addition, what kind of diseases in the presence of Syndrome X are treatable by compound 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone? Therefore, the specification lacks description of " method of treating a patient with a disease in the presence of Syndrome X".

12. ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

Claims 53-65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because the specification does not enable the instant compound to alter the gene expression and therefore to treat any and all known or unknown diseases. The claim contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

1) The breadth of the claims.

2) The nature of the invention,

3) The state of the prior art,

4) The level of one of ordinary skill,

5) The level of predictability in the art,

6) The amount of direction provided by the inventor,

7) The existence of working examples,

8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The nature of the invention: The instant invention is drawn to method of diagnosing a patient with a disease selected from the group consisting of: Alzheimer's disease; Immune deficiency syndrome; and autoimmune disease.

The state of the prior art: " The concanavalin A (Con A) blots in conjuction with the peptide mapping techniques to analyze serum samples and cerebrospinal fluids (CSF) obtained from patients with autoimmune diseases: systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), mixed connective tissue disease (MCTD), scleroderma (SCL), Sjogren's syndrome (SS), and polymysitis (PM); disease of probable autoimmune origin: hepatopathies (HP); diseases of suspected autoimmune origin: schizophrenia and Alzheimer's disease (AZ); and conditions not related to autoimmunity: pregnancy (PG) and elevation of the carcinoembryonic antigen (CEA), in comparison to normal donors (NHS). Thus, the study of changes in glycosylation pattetns in selected serum proteins may be a valuable diagnostic approach to define the pathophysiology of inflammatory and autoimmune disorders" (SASO et al., Inflammation, Vol. 17, pages 465-479).

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can diagnose which specific disease). There is no absolute predictability even in view of the seeming high level

of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The predictability in the art: It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F. 2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, the instantly claimed invention is highly unpredictable since one skilled in the art would recognize that in regards to the therapeutic effects, whether or not the compounds of formula 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone would be useful for diagnosing a patient with a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease.

Amount of guidance/working examples: Applicant has not guidance or examples for diagnosing Alzheimer's disease, Immune deficiency syndrome, and autoimmune disease. The specification does not seem to enable the correlation between a compound of 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and the diagnosing Alzheimer's

disease, Acquired immune deficiency syndrome, and autoimmune disease.

The breadth of the claims: The breadth of claims is drawn to method of diagnosing in a patient a disease selected from the group consisting of: Alzheimer's disease; Immune deficiency syndrome; and autoimmune disease.

The quantity of undue experimentation needed: Since the guidance and teaching provided by the specification is insufficient for diagnosing diseases such as Alzheimer's disease, Acquired immune deficiency syndrome, and autoimmune disease, one of ordinary skill in the art, even with high level of skill, is unable to use the instant compounds as claimed without undue experimentation.

The level of the skill in the art: The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Taking all of the above into consideration, it is not seen where the instant claims 53-65, for method of diagnosing in a patient a disease selected from the group consisting of: Alzheimer's disease; Immune

deficiency syndrome; and autoimmune disease, have been enabled by the instant specification.

13. Claims 66-72 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because the specification does not enable the instant compound to alter the gene expression and therefore to treat any and all known or unknown diseases. The claim contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

1) The breadth of the claims.

2) The nature of the invention,

3) The state of the prior art,

4) The level of one of ordinary skill,

5) The level of predictability in the art,

6) The amount of direction provided by the inventor,

7) The existence of working examples,

8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The nature of the invention: The instant invention is drawn to method of diagnosing a patient with a disease.

The state of the prior art: " The concanavalin A (Con A) blots in conjuction with the peptide mapping techniques to analyze serum samples and cerebrospinal fluids (CSF) obtained from patients with autoimmune diseases: systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), mixed connective tissue disease (MCTD), scleroderma (SCL), Sjogren's syndrome (SS), and polymysitis (PM); disease of probable autoimmune origin: hepatopathies (HP); diseases of suspected autoimmune origin: schizophrenia and Alzheimer's disease (AZ); and conditions not related to autoimmunity: pregnancy (PG) and elevation of the carcinoembryonic antigen (CEA), in comparison to normal donors (NHS). Thus, the study of changes in glycosylation pattetns in selected serum proteins may be a valuable diagnostic approach to define the pathophysiology of

inflammatory and autoimmune disorders" (SASO et al., Inflammation, Vol. 17, pages 465-479).

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can diagnose which specific disease). There is no absolute predictability even in view of the seeming high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The predictability in the art: It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F. 2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, the instantly claimed invention is highly unpredictable since one skilled in the art would recognize that in regards to the therapeutic effects, whether or not the compounds of formula 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone would be useful for diagnosing a patient with a disease.

Amount of guidance/working examples: Applicant has not guidance or examples for diagnosing a disease. The specification does not seem to

enable the correlation between a compound of 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and the diagnosing a disease in a patient.

The breadth of the claims: The breadth of claims is drawn to method of diagnosing in a patient a disease.

The quantity of undue experimentation needed: Since the guidance and teaching provided by the specification is insufficient for diagnosing a disease, one of ordinary skill in the art, even with high level of skill, is unable to use the instant compounds as claimed without undue experimentation.

The level of the skill in the art: The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Taking all of the above into consideration, it is not seen where the instant claims 66-72, for method of diagnosing in a patient a disease, have been enabled by the instant specification.

14. Claim 73 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because the specification

does not enable the instant compound to alter the gene expression and therefore to treat any and all known or unknown diseases. The claim contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

1) The breadth of the claims.

2) The nature of the invention,

3) The state of the prior art,

4) The level of one of ordinary skill,

5) The level of predictability in the art,

6) The amount of direction provided by the inventor,

7) The existence of working examples,

8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The nature of the invention: The instant invention is drawn to method of diagnosing a person the possible presence of Syndrome X.

The state of the prior art: " Metabolic syndrome (MS), dysmetabolic syndrome or insulin-resistance syndrome (or syndrome X as it was initially designated), which is closely linked to insulin resistance, is a condition which is recognized as raising the risk of cardiovascular disease. The prevalence and the excess coronary heart disease (CHD) risk of the metabolic syndrome (MS) and its components were investigated in the Turkish Adult Risk Factor Study in both a prospective and a cross-sectional manner. In a population sample, representative of Turkish adults who have low levels of high-and low-density lipoprotein-cholesterol)HDL-C and LDL-C), MS was identified in conformity with the definition used in the recent NCEP guidelines" (Onat et al., Atherosclerosis, Vol. 165, pages 285-292).

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can diagnose which specific disease). There is no absolute predictability even in view of the seeming high level of skill in the art. The existence of these obstacles establishes that the

contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The predictability in the art: It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F. 2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, the instantly claimed invention is highly unpredictable since one skilled in the art would recognize that in regards to the therapeutic effects, whether or not the compounds of formula 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone would be useful for diagnosing a person the possible presence of Syndrome X.

Amount of guidance/working examples: Applicant has not guidance or examples for diagnosing in a person the possible presence of Syndrome X. The specification does not seem to enable the correlation between a compound of 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and the diagnosing in a person the possible presence of Syndrome X.

The breadth of the claims: The breadth of claims is drawn to method of diagnosing in a person the possible presence of Syndrome X.

The quantity of undue experimentation needed: Since the guidance and teaching provided by the specification is insufficient for diagnosing in a person the possible presence of Syndrome X, one of ordinary skill in the art, even with high level of skill, is unable to use the instant compounds as claimed without undue experimentation.

The level of the skill in the art: The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Taking all of the above into consideration, it is not seen where the instant claim 73, for method of diagnosing in a person the possible presence of Syndrome X, have been enabled by the instant specification.

15. Claims 53-72 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because the specification does not enable the instant compound to alter the gene expression and therefore to treat any and all known or unknown diseases. The claim contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

1) The breadth of the claims.

2) The nature of the invention,

3) The state of the prior art,

4) The level of one of ordinary skill,

5) The level of predictability in the art,

6) The amount of direction provided by the inventor,

7) The existence of working examples,

8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The nature of the invention: The instant invention is drawn to method of treating a patient with a disease selected from the group consisting of:

Alzheimer's disease; Immune deficiency syndrome; and autoimmune disease.

The state of the prior art: " TR6 polypeltides, polynucleotides and recombinant materials are using for treatment of chronic and acute inflammation, arthritis, septicemia, autoimmune disease, transplant rejection, infection, stroke, syndrome, asthma, cancer, alzheimer's disease. TR6 polynucleotides are using as diagnostic reagents for detecting disease. In addition, chronic and acute inflammation, arthritis, septicemia, autoimmune diseases, transplant rejection, acute respiratory disease syndrome, asthma, cancer, AIDS, etc. can be diagnosed by methods comprising determining from a sample derived from a subject an abnormally decreased or increased level of TR6 polypeptide or TR6 mRNA." (US 6,313,269)

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can treat which specific disease). There is no absolute predictability even in view of the seeming high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The predictability in the art: It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for

physiological activity. *In re Fisher*, 427 F. 2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, the instantly claimed invention is highly unpredictable since one skilled in the art would recognize that in regards to the therapeutic effects, whether or not the compounds of formula 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone would be useful for treating a patient with a disease selected from the group consisting of Alzheimer's disease; Acquired immune deficiency syndrome; and autoimmune disease.

Amount of guidance/working examples: Applicant has not guidance or examples for treating Alzheimer's disease, Immune deficiency syndrome, and autoimmune disease. The specification does not seem to enable the correlation between a compound of 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and the treating Alzheimer's disease, Acquired immune deficiency syndrome, and autoimmune disease.

The breadth of the claims: The breadth of claims is drawn to method of treating in a patient a disease selected from the group consisting of: Alzheimer's disease; Immune deficiency syndrome; and autoimmune disease.

The quantity of undue experimentation needed: Since the guidance and teaching provided by the specification is insufficient for treating diseases such as Alzheimer's disease, Acquired immune deficiency syndrome, and autoimmune disease, one of ordinary skill in the art, even with high level of skill, is unable to use the instant compounds as claimed without undue experimentation.

The level of the skill in the art: The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Taking all of the above into consideration, it is not seen where the instant claims 53-72, for method of treating in a patient a disease selected from the group consisting of: Alzheimer's disease; Immune deficiency syndrome; and autoimmune disease, have been enabled by the instant specification.

16. Claim 73 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because the specification does not enable the instant compound to alter the gene expression and therefore to treat any and all known or unknown diseases. The claim contains subject matter, which was not described in the specification in

such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

1) The breadth of the claims.

2) The nature of the invention,

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4) The level of one of ordinary skill,

5) The level of predictability in the art,

6) The amount of direction provided by the inventor,

7) The existence of working examples,

8) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The nature of the invention: The instant invention is drawn to method of treating a person the possible presence of Syndrome X.

The state of the prior art: " The discovery of a link between an adverse in utero environment and the propensity to develop metabolic and cardiovascular disease in adult life is one of the most important advances in epidemiological research of recent years. Increasing experimental evidence suggests that alterations in the fetal environment may have long-term consequences for the development of metabolic disorders in adult life. This process has been termed ' fetal programming' and we have shown that undernutrition of the mother during gestation leads to development of the metabolic syndrome X during adult life. In the presence study we have investigated the effects of growth hormone (GH) treatment on blood pressure and metabolic parameters. Our data demonstrated that GH treatment reduces hypertension and improves cardiovascular function in animals exposed to adverse environmental conditions during fetal or postnatal life." (Vickers et al., Journal of Endocrinology, Vol. 175, pages 615-623).

The state of the prior art is that it involves screening in vitro and in vivo to determine which compounds exhibit the desired pharmacological activities (i.e. what compounds can treat which specific disease). There is no absolute predictability even in view of the seeming high level of skill in the art. The existence of these obstacles establishes that the

contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The predictability in the art: It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F. 2d 833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. In the instant case, the instantly claimed invention is highly unpredictable since one skilled in the art would recognize that in regards to the therapeutic effects, whether or not the compounds of formula 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone would be useful for treating a a person the possible presence of Syndrome X.

Amount of guidance/working examples: Applicant has not guidance or examples for treating a person the possible presence of Syndrome X. The specification does not seem to enable the correlation between a compound of 3-[2-[decahydro-6-hydroxy-5-(hydroxymethyl)-5,ha-dimethyl-2-methylene-1-naphthalenyl]ehtylidene]-dihydro-4-hydroxy-2(3h)-furanone and the treating a person the possible presence of Syndrome X.

The breadth of the claims: The breadth of claims is drawn to method of treating a person the possible presence of Syndrome X.

The quantity of undue experimentation needed: Since the guidance and teaching provided by the specification is insufficient for treating a person the possible presence of Syndrome X, one of ordinary skill in the art, even with high level of skill, is unable to use the instant compounds as claimed without undue experimentation.

The level of the skill in the art: The level of skill in the art is high. However, due to the unpredictability in the pharmaceutical art, it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by in vitro and in vivo screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Taking all of the above into consideration, it is not seen where the instant claim 73, for method of treating a person the possible presence of Syndrome X, have been enabled by the instant specification.

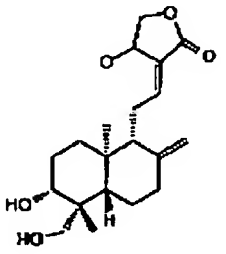
17. *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

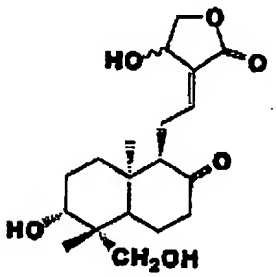
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 53,65-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Boggs et al., US 5,883,074. The compound on sheet 13, Fig. 6e



is encompassed by the instant compound claimed with the same activity i.e. a bacterial infection is broadly encompassed by AIDS and since Boggs is silent as to receptor activity of compound to peroxysome proliferators activated receptor, then the activity is currently inherited by Boggs . Therefore, the instant claims are anticipated with the same utility by Boggs et al.

18. Claims 53-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Babish et al., US 2002/0068098. The compound on sheet 2, Fig. [B3]



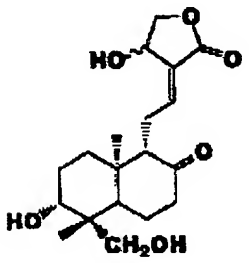
is encompassed by the instant compound claimed with the same activity i.e. antihyperlipidemia (one factor of Syndrome X), see page 5, paragraph 39, anti-inflammatory, Alzheimer disease, AIDS,

see page 1, paragraph 3-6. Therefore, the instant claims are anticipated with the same utility by Babish et al.

19. Claims 66-72 are rejected under 35 U.S.C. 102(b) as being anticipated by panossian et al., Phytomedicine, Vol., 9, pages 598-605. On page 608, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. induce tumor necrosis factor-alpha (TNF-α), see summary. Therefore, the instant claims are anticipated with the same utility by Panossian et al.

20. Claims 53-54, 63, and 66-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Wheelock et al., US 5,833,994. On column 21, lines 49-52, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e.. Therefore, the instant claims are anticipated with the same utility by Wheelock et al.

21. Claims 53-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Babish et al., US 2002/0077350. On sheet 2, the compound [C3], Andrographolide



is encompassed by the instant compound claimed with the same activity i.e. antihyperlipidemia (one factor of Syndrome X), see page 6, paragraph 49, anti-inflammatory, Alzheimer disease, AIDS, see

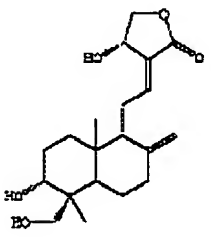
page 1, paragraph 1-5. Therefore, the instant claims are anticipated with the same utility by Babish et al.

22. Claims 53-54, and 65-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Wheelock et al., US 6,140,063. On column 22, lines 35-38, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. autoimmune diseases, immunodeficiency virus (HIV-1), see column 2, lines 60-65. Therefore, the instant claims are anticipated with the same utility by Wheelock et al.

23. Claims 53-54, 64-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Babish et al., WO 96/17605. On page 16, lines 15-16, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. Alzheimer, AIDS, see page 9 lines 12-24. Therefore, the instant claims are anticipated with the same utility by Babish et al.

24. Claims 53-54, and 65-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Wheelock et al., WO 98/30213. On page 32, Example 8, lines 5-7, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. AIDS, cancer . Therefore, the instant claims are anticipated with the same utility by Wheelock et al.

25. Claims 53-54, and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Nanduri et al., US 6,410,590. On column 8,lines 10-25, the compound of formula (II)



is encompassed by the instant compound claimed with the same activity i.e. autoimmune diseases, anti cancer, AIDS, see abstract. Therefore, the instant claims are anticipated with the same utility by Nanduri et al.

26. Claims 53-54, and 64-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Nanduri et al., US 6,486,196. On column 41,line 2, the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. anticancer, HIV, Alzheimer, see column 3, lines 20-25 . Therefore, the instant claims are anticipated with the same utility by Nanduri et al.

27. Claims 53-54, 60,and 65-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Nanduri et al., US 2002/0016324. On page 16,Preparation 1 [0341], the compound Andrographolide is encompassed by the instant compound claimed with the same activity i.e. anticancer, HIV, psoriasis, cancer, see pae 3, paragraph 21. Therefore, the instant claims are anticipated with the same utility by Nanduri et al.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niloofar Rahmani whose telephone number is 571-272-4329. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NILOOFAR RAHMANI
03/01/2006
NR

D.MARGARET SEAMAN
PRIMARY EXAMINER
GROUP 1625